

NEW TAXA OF *MONNINA* (POLYGALACEAE) FOR SOUTH AMERICA

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ABSTRACT

The following new species of *Monnina* (Polygalaceae) are described, illustrated, and affinities discussed: *Monnina grandifolia* (Colombia), *Monnina purpurea* (Ecuador), *Monnina fosbergii* (Ecuador), *Monnina piurensis* (Perú).

KEY WORDS: Polygalaceae, Colombia, Ecuador, Perú, *Monnina*, new species

During the revision of the genus *Monnina* (Polygalaceae) for the *Flora Neotropica*, I have been able to find several undescribed species of *Monnina* from Colombia (*M. grandifolia*); Ecuador (*M. purpurea*, *M. fosbergii*); Perú (*M. piurensis*).

Monnina grandifolia Ferreyra, *sp. nov.* (Figure 1). Type Collection: COLOMBIA. Tolima, Río Saldana, 1600-1800 m, *E. Core 1608* (HOLOTYPE: US 2046344).

M. colombianae Ferreyra *affinis*, foliorum laminis ellipticis spatulatis, acutis, mucronatis, sepalo exteriori acuto, sepalis duobus inferioribus liberis bracteis florigeris linearibus differt.

Branched shrub, branches glabrous; leaves elliptic-spathulate 150-300 mm long, 90-160 mm wide with 8-9 pairs of lateral veins, acute-mucronate, glabrous above, glabrescent beneath; panicle 150-200 mm long, racemes ascendent, bracts filiform, conspicuous at the apex; outer sepals free, lanceolate, acute, 1.2-2.0 mm long; wings 3.0-3.5 mm long, glabrous; keel 4.0-4.2 mm long, glabrous, orbicular; upper petals spathulate; stamens 8; ovary ovoid, 1.0-1.2 mm long, glabrous; style geniculate, glabrous; drupe more or less corrugate, pyriform-ovoid.

Distribution: Known only from the type collection.

This new species resembles *Monnina colombiana* Ferreyra, but it is quite distinct in its branches glabrous, the leaves elliptic, the upper sepals free, the drupe ovoid, etc.

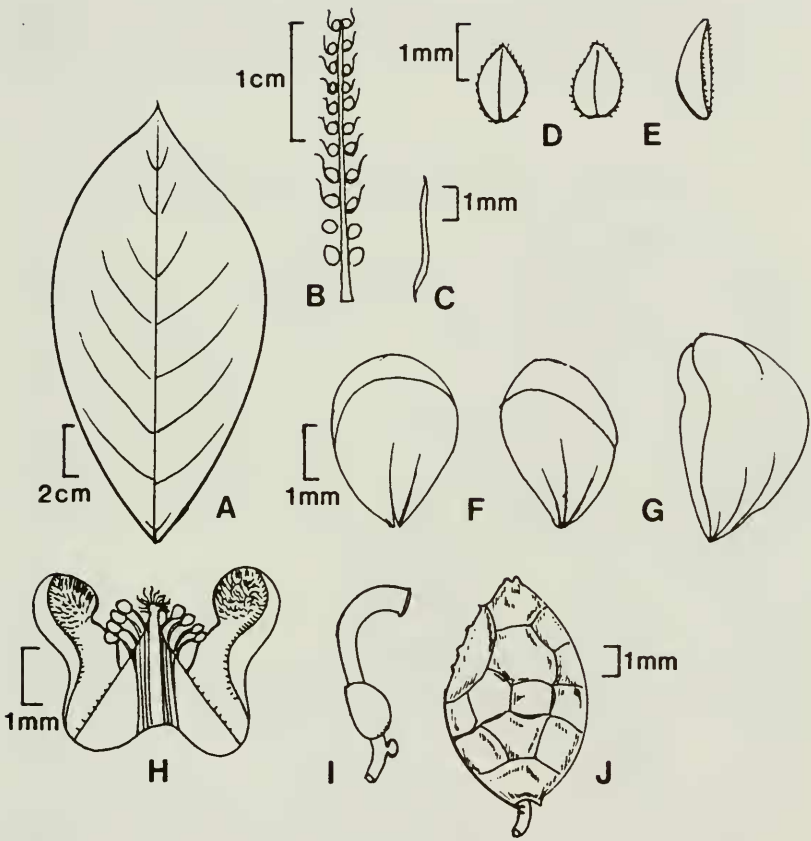


Fig. 1 *Monnina grandifolia* Ferreyra
A. leaf; B. raceme; C. bract; D-E. lower sepals; F. wings; G. keel; H. upper petals and stamens; I. gynaecium; J. drupe.

Monnina purpurea Ferreyra, *sp. nov.* (Figure 2). Type Collection: ECUADOR. Pichincha, Reserva Río Guayalito, carretera antigua de Quito a Santo Domingo, 1800-2200 m, V. Zak 1118 (HOLOTYPE: US 3120014; Isotypes: USM, QCA).

M. pterocarpae Ruiz & Pavon affinis, foliis majoribus laminis ad 310 mm longis supra viridibus, subtus purpureis differt.

Annual, glabrous, stem erect; leaves ovate-elliptic, 230-310 mm long, 130-150 mm wide, subsessile, obtuse or acute, with 8-9 pairs of lateral veins, glabrous, entire, greenish above, purpureous beneath; racemes 6, terminal, glabrous; flowers 5.0-5.5 mm long; outer sepals free, 1 nerved, ovate-triangular, obtuse, ciliate; the two lower ones 2.5-3.0 mm long, 1.6-1.8 mm wide, the upper sepal 2.6-3.2 mm long, 1.8-2.0 mm wide; wings purple, 4.8-5.8 mm long, 3.8-4.8 mm wide, obovate, more or less acute at base; keel glabrous within, obtuse at base, 3 nerved, apex lobulate; upper petals spatulate; stamens 8, the filaments short; ovary ovoid, 2.4-3.5 mm long, 1.0-1.6 mm wide, glabrous; style geniculate, glabrous; stigma lobulate; samara 7-9 mm long, 5-7 mm wide, glabrous, cordate, the wing slightly corrugate.

Distribution: Known only from the type locality.

The large leaves, purple beneath, terminal inflorescence and the purple flowers characterize this new species. It is closely related to *Monnina pterocarpa* Ruiz & Pavon from which it differs in having the leaves large, ovate-elliptic, purple beneath, the terminal and purple inflorescence with 6 racemes. In addition, the new species occurs in the subtropical and humid tropics ecosystem.

Monnina fosbergii Ferreyra, *sp. nov.* (Figure 3). Type Collection: ECUADOR. Azuay, Tablón de Oña, cerca Oña, 2740 m, R. Fosberg 29204 (HOLOTYPE: US 2109891). Paratype: Oña-Rancho Ovejero, 2700-2800 m, H.G. Barclay & P. Juajibioy 8497 (US).

M. filifoliae Chodat affinis, habitu glabro, foliis hirsutis, bracteis florigeris linearibus maioribus, stylo cylindrico differt.

Herb, erect, densely foliose; leaves lineate 1.2-1.5 cm long, 0.3-0.4 mm wide, slightly spatulate, hirsute, acuminate, sessile. Racemes simple, terminal, axis bracteate, the bracts linear, 5.0-6.5 mm long, hirsute, deciduous. Flowers purple, 5-6 mm long, pedicel 1.0-1.2 mm long, finely pubescent; outer sepals free, 1 nerved, ovate-triangular, acute, ciliate, the two lower ones 2.2-2.8 mm long, 1.5-1.8 mm wide, the upper one 2.5-3.2 mm long, 1.8-2.0 mm wide; wings 5.0-5.5 mm long, 3.5-3.8 mm wide, ovate, more or less obtuse at base, 3 nerved,

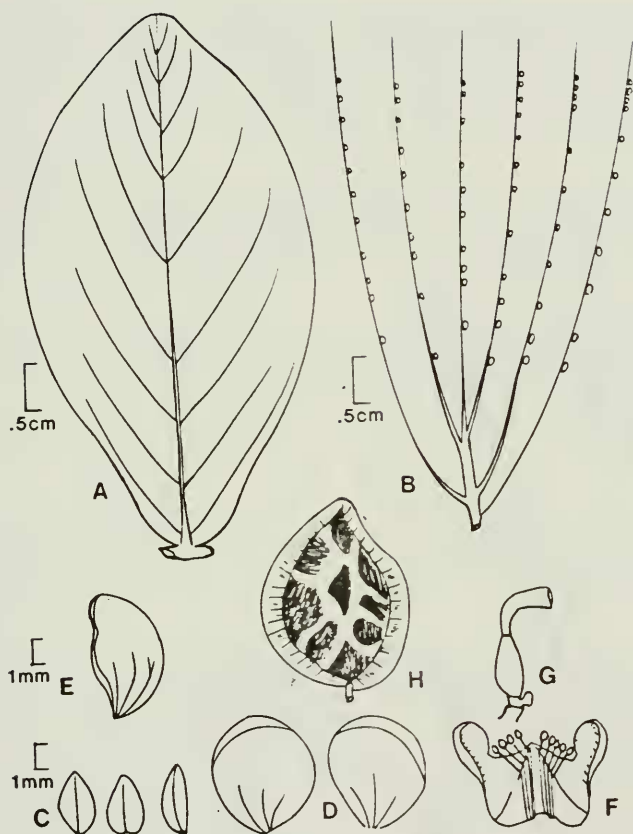


Fig. 2 *Monnina purpurea* Ferreyra

A. leaf; B. racemes; C. lower sepals; D. wings; E. keel; F. upper petals and stamens; G. gynaecium; H. samara.

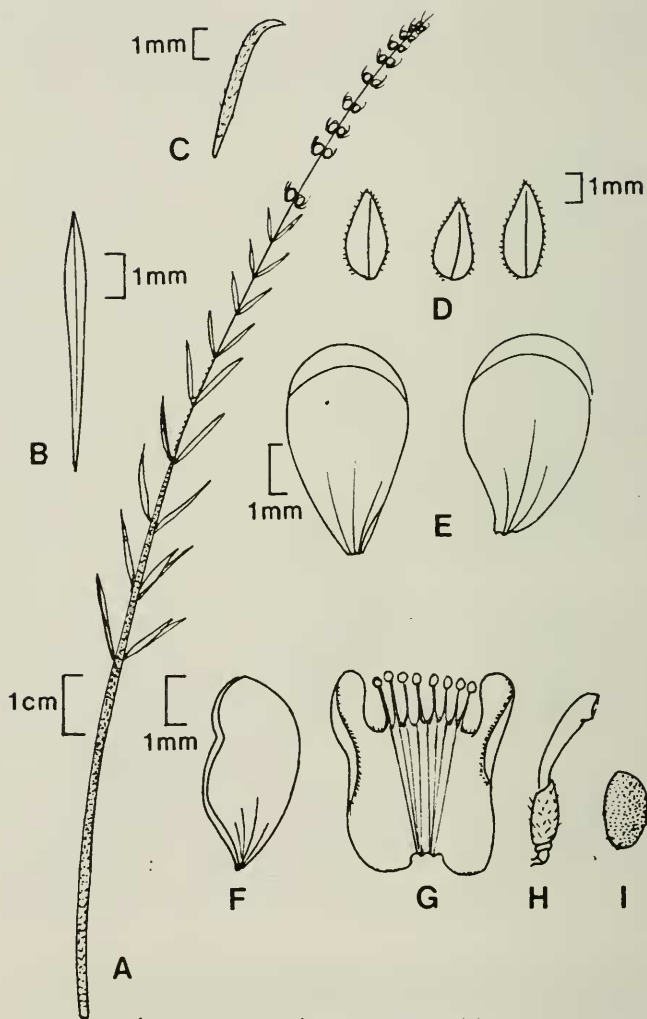


Fig. 3 *Monnina fosbergii* Ferreyra
 A. upper branch; B. leaf; C. bract; D.
 lower sepals; E. wings; F. keel; G. upper
 petals and stamens; H. gynaecium; I. drupe.

glabrous; keel 4.0-4.3 mm long, 2.0-2.5 mm wide, orbicular convolute, glabrous within, obtuse at base, 3 nerved, apex lobulate; upper petals elongate, almost spathulate; stamens 8, filaments to 1 mm long, united 2/3; ovary oblong 1.8-2.2 mm long, 0.8-1.2 mm wide, pubescent; style 2.2-2.5 mm long, geniculate above the base, cylindric, glabrous; stigma bilobulate, fruit drupaceous 2.2-2.8 mm long, oblong.

Distribution: Known only from the type locality.

The habit is very similar to *Monnina filifolia* Chodat, a species of southern Perú, from which it differs in having linear-spathulate, hirsute leaves, the style without wings, etc.

Monnina piurensis Ferreyra, *sp. nov.* (Figure 4). Type Collection: PERÚ.

Piura: near Piura on semidesert, sandy plain with grasses and spiny shrubs, *Ferreyra 5882* (HOLOTYPE: USM 24630; Isotype: US). Paratypes: PERÚ. Piura: Sullana, between Piura and Sullana, on sandy place, *Ferreyra 6005* (USM, US).

Planta herbacea annua radice simplici; caulis teres glaber; folia herbacea membranacea elliptico-lanceolata ad 10.5 cm longa. 4.5 cm lata; a *M. pterocarpae* Ruiz & Pavon cui affinis foliis maioribus bracteis florigeris filiformibus differt.

Annual herb, 50-70 cm high; root 14-20 cm long, 1-4 mm in diameter, simple; stem erect, terete; leaves elliptic-lanceolate, 8.0-10.5 cm long, 4.0-4.5 cm wide, acuminate, sometimes acute, glabrous, entire, membranaceous, subsessile, the costa with 6-8 pairs of nerves; racemes simple, terminal, bracteate, the bracts filiform, flexuose, 2-3 mm long, deciduous; flowers 4.0-4.2 mm long; outer sepals free, lanceolate, the two lower ones 1.5-2.0 mm long, 1.0-1.2 mm wide, glabrous, the upper one 2.2-2.6 mm long, 0.8-1.5 mm wide; wings violet, 3.8-4.5 mm long, 2.8-3.8 mm wide; keel purple, 4.0-4.5 mm long, 2.5-3.5 mm wide, orbicular, plicate, trilobate, the middle lobe obtuse-emarginate, larger; upper petals elongate, spathulate, pubescent; stamens 8; ovary elliptic-ovoid, 1.0-1.2 mm long, 0.5-0.8 mm wide; style 1.5-2.5 mm long, geniculate, cylindric, without wings; fruit samara 7-8 mm long, 5-6 mm wide.

Distribution: Known only from the Department of Piura, in sandy plain of the northern coast, between 100-150 m altitude.

The new species is very closely related to *Monnina pterocarpa*, but differs in the elliptic-lanceolate leaves, larger (up to 10.5 cm long, 4.5 mm wide) leaves with 6-8 pairs of lateral veins; the style cylindric without wings; the bracts of racemes filiform, flexuose, etc.

The habit of this plant suggests also *Monnina spruceana* Chodat from the páramo of Ecuador and *M. eriocarpa* Chodat from Central Bolivia, but it is different in the leaves, the style, and the bracts of the racemes.

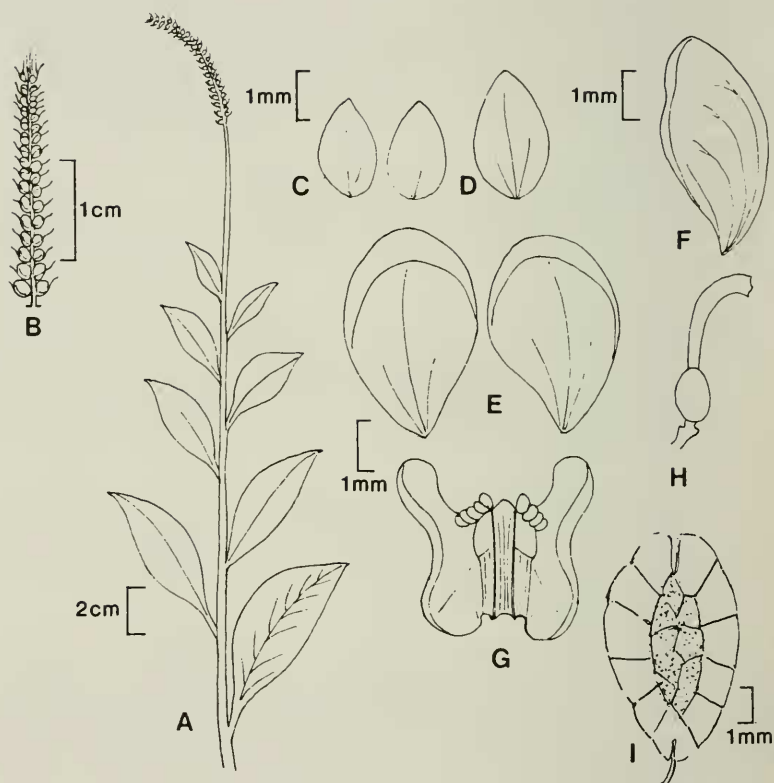


Fig. 4 *Monnina piurensis* Ferreyra

A. upper branch; B. raceme; C-D. lower sepals; E. wings; F. keel; G. upper petals and stamens; H. gynaecium; I. samara.